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Supervisor's Initial		<b>WATUMULL INSTITUTE</b>	Roll No.	
		First/Second/Third/Periodic/Improvement Text		

Subject \_\_\_\_\_ Section \_\_\_\_\_

Class \_\_\_\_\_ Date \_\_\_\_\_

Q	1	2	3	4	5	6	Total	Signature of Examiner
M		11.05						

- ② marks      A B for RFMA.      diagram.
- ① Before the foll. with mathematical equations, wherever reqd.
- ① Directivity.      ② Beam Width.      ③ Radiation Intensity.
- ④ Ant. Rad. Efficiency.      ⑤ Ant. Radiation density.
- ⑥ Beam Area.

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Explain the radiation mechanism of an antenna using single wire as a source of radiation.

Explain the diff. antenna radiation regions.

An ant. has a field pattern given by  $E(\theta) = \cos^2(\theta)$  for  $0^\circ \leq \theta \leq 90^\circ$ . Find the Half Power Beam Width. Find the Beam Area.

The radn. intensity of a unidirectional ant. is  $U = U_m \cos \theta$   $0 \leq \theta \leq \pi/2$ ,  $0 \leq \phi \leq 2\pi$ . Find the exact directivity.

An ant. has a loss resistance of  $10\Omega$ , power gain of 20 & directivity 22, calculate the radn. resistance

calculate the directivity of an ant. with  $\theta_{HP} = 2^\circ$  &  $\phi_{HP} = 1^\circ$  & find the gain of this ant. if efficiency  $\eta = 5$ .